

REGION-SELECTIVE CRYSTAL GROWTH METHOD

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Abstract

PURPOSE: To form a fine structure directly inside a compound semiconductor crystal from a growth stage.

CONSTITUTION: When a compound semiconductor crystal is formed by an atomic layer epitaxial(ALE) method, a laser beam is irradiated parallel to a face immediately on a growth face and the electron state of medium molecules 12 inside the passage region 14 of the beam is changed. Thereby, the adsorption of the growth medium molecules 12 to the growth face is controlled, and a fine structure is formed. As different from a case where a posterior treatment such as an etching operation or the like is executed repeatedly to a uniformly grown crystal and a fine structure is formed, the fine structure can be obtained with good efficiency and with good accuracy.